

European Network on New Sensing Technologies for Air Pollution Control and Environmental Sustainability - *EuNetAir*

COST Action TD1105

Final Meeting at PRAGUE (CZ), 5-7 October 2016

New Sensing Technologies for Air Quality Monitoring

Action Start date: 01/07/2012 - Action End date: 15/11/2016 - EXTENSION: **15/11/2016**

Conclusions

 **cost**
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



Michele Penza

Function in the Action: Action Chair

ENEA - Brindisi, Italy



FINAL MEETING - SIXTH SCIENTIFIC MEETING

Working Groups and Management Committee

organized by Academy of Sciences of the Czech Republic

J. Heyrovský Institute of Physical Chemistry
Prague, Czech Republic, 5 - 7 October 2016



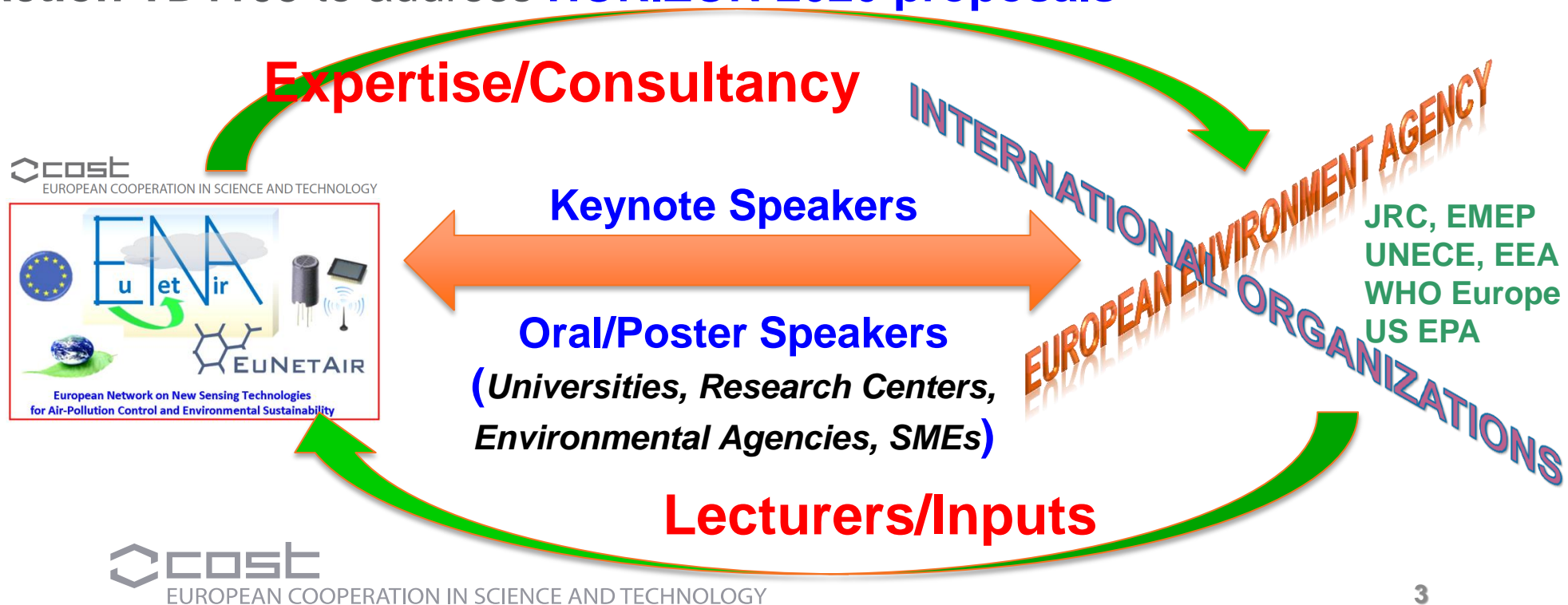
Meeting AGENDA

5 Oct. 2016 - Wednesday	
09:00 - 18:00	REGISTRATION
09:30 - 10:00	WELCOME SESSION
10:00 - 11:00	PLENARY SESSION 1: Invited Talks
11:00 - 11:30	<i>Coffee-Break</i>
11:30 - 13:00	PLENARY SESSION 2: Invited Talks
13:00 - 14:30	<i>Lunch</i>
14:30 - 16:00	WG1 Session
16:00 - 16:30	<i>Coffee-Break</i>
16:30 - 18:30	WG2 Session
18:30	<i>Gathering of Day</i>
20:30 - 23:00	<i>Social Dinner</i>
6 Oct. 2016 - Thursday	
09:00 - 18:00	REGISTRATION
09:00 - 11:00	WG3 Session
11:00 - 11:30	<i>Coffee-Break</i>
11:30 - 13:00	WG4 Session
13:00 - 14:00	<i>Lunch</i>
14:00 - 15:30	POSTER SESSION
15:00 - 15:30	<i>Coffee-Break during Poster Session</i>
15:30 - 18:00	SIG1-SIG4 Session
18:00 - 18:30	Inputs on Follow-up of EuNetAir
18:30	CONCLUSIONS
20:30	<i>Free Dinner</i>
7 Oct. 2016 - Friday	
09:00 - 11:00	Action WGs/SIGs GENERAL ASSEMBLY
11:00 - 11:30	<i>Coffee-Break</i>
11:30 - 13:00	9th MANAGEMENT COMMITTEE MEETING
13:00 - 14:30	<i>Lunch</i>
14:30	Meeting Closing

AIM of *EuNetAir* Meeting at Prague

New Sensing Technologies for Air Quality Monitoring

- **Provide** from Action TD1105 *EuNetAir* an Overview of the *Best Available Sensing Technologies, Methods and Best Practices on **Clean Air for Smart Cities in Europe*** to International Organizations (IOs), Policy Makers and Public Institutions, Local Managers.
- **Discuss and Consolidate** on ***Final Results** & **Follow-Up*** of the COST Action TD1105 to address **HORIZON 2020** proposals



COST Action TD1105 *EuNetAir*: 6th Meeting at Prague

Statistics of the Action Meeting at Prague:

e-COST Registered Participants / Total Participants:

55 / 60

Sessions including Plenary, Oral & Poster:

10

Keynote/Invited Speakers:

12

Contributed Speakers:

26

Poster Presenters:

15

COST Countries (31 signed MoU) involved in Workshop:

Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Norway, Poland, Portugal, Serbia, Spain, Sweden, Switzerland, Turkey, UK and Russia (Near Neighbour Country)

23

Gender Balance in WGs Meeting:

18 F (33%)
37 M (67%)

Early Stage Researchers (ESRs):

14 (25%)

Topics of Meeting



- **Functional Materials for AQ Sensors**
- **Gas Sensors and Sensor-Systems**
- **Air Pollution Modelling**
- **Methods, Standards, Protocols, Guidelines**
- **Environmental Measurements and Data Fusion**
- **Health Effects of Air Pollution**
- **Environmental Sustainability Applications**
- ***Air Quality Sensor Systems State-of-Art in Europe***



Year 4: Scientific Planning of *EuNetAir* (1/2)

Meetings/Workshops/Training Schools managed

(Year 4: 1 July 2015 - 15 May 2016): EXTENSION: 15 Nov. 2016

- **WG1-WG4 Meeting** on *Air Quality Monitoring and Calibration: Horizons in Sensing Technologies, Methods and Modelling - Start of the 2nd EuNetAir Air Quality Joint-Exercise Intercomparison* organized by the VINCA Institute, Belgrade (**Serbia**), 13 - 14 Oct. 2015. Local organizer: Dr. Milena Jovasevic-Stojanovic, VINCA and Anka Cvetkovic, Public Health Institute of Belgrade
- The **4th International Workshop of the COST Action TD1105** on *Innovations and Challenges for Air Quality Control Sensors* at FFG (National AT COST Office), Wien (**Austria**), 25 - 26 February 2016. Local organizer: Dr. Anton Kock, MCL
- The **Action 4th International Training School** on *Modelling, Methods and Technologies for Air Quality Control* at Emdrup Campus in Copenhagen, by Aarhus University (**Denmark**), 19 - 22 April 2016. Local organizer: Prof. Ole Hertel, Aarhus University. Trainees: 24. Trainers: 11.

MC/WG Meetings managed

(Year 4: 1 July 2015 - 15 May 2016): **EXTENSION: 15 Nov. 2016**

- **5th SCIENTIFIC MEETING: WGs Meeting and 8th MC Meeting on New Sensing Technologies for Indoor Air Pollution Monitoring and Environmental Measurements** at Bulgarian Academy of Sciences, Sofia (Bulgaria), 16 - 18 Dec. 2015. Local organizers: Prof. Ivan Nedkov and Prof. Dimiter Syrakov, BAS
- **Special Session EuNetAir / Core-Group Meeting** to **EUROSENSORS 2015**, Freiburg (Germany), 6 - 10 September 2015

Year 5 (Extension): Scientific Planning of *EuNetAir* (1/1)

(Year 4: 1 July 2015 - 15 May 2016): EXTENSION: 15 Nov. 2016

- **DISSEMINATION MEETING at European Materials Research Society (EMRS) on Functional Materials for Environmental Sensors and Energy Systems** at EMRS Spring Meeting 2016, Lille (France), 2 - 6 May 2016. Symposium organizers: Michele Penza, Anita Lloyd Spetz, Albert Romano-Rodriguez and Meyya Meyyappan
- **CORE-GROUP MEETING at SENSOR+TEST 2016 on Novel Sensor Solutions for Indoor Air Quality** at AMA Conference 2016, Nuremberg (Germany), 10 - 12 May 2016. Symposium organizers: Michele Penza, Andreas Schuetze, Anton Kock and Mathias Holz.

- **6th SCIENTIFIC MEETING: WGs Meeting and 9th MC Meeting on New Sensing Technologies for Outdoor Air Quality Monitoring** at Academy of Sciences of the Czech Republic, Prague (**Czech Republic**), 5 - 7 October 2016. Local Organizers: Prof. Zdenek Zelinger, Dr. Vera Kurkova, Dr. Roman Neruda, ASCR

Action Recommendations: *Roadmap 2015-2020*

- **Micro-Sensors should not substitute but supplement routine environmental monitoring equipments/devices**
- **Future Routine Environmental Networks** may look very different from today and **include low-cost and accurate Sensors ?**
- **Green Routes through the city** or access to information about **air-pollution load** at specific local address **might be future goals**
- **Pervasive low-cost Micro-Sensors for Indoor Energy Efficiency should be a must for future Green-Buildings**
- What do we want to provide (e.g. **AQI**) on the long-term in relation to **Routine Monitoring** and **Public Information to enhance Environmental Awareness ?**

Future Research & Innovation

- **Advanced Functional Materials for Sensor Technologies**
- **Wearable Sensors to Monitor Air-Pollution Personal Exposure**
- **Mobile Sensing (Smartphones, Tablets, Watches)**
- **Fixed Sensor Nodes in Urban Wireless Networks**
- **Mobile Sensor Nodes on Public Transports (Buses, Trams, etc.)**
- ***Sensing City* (bikes, city guardians, citizens, etc.)**
- **Indoor Energy Efficiency Sensors (VOCs, Formaldehyde, etc)**
- **Sensors for Greenhouse Gases Monitoring (CO₂, CH₄, N₂O, etc.)**
- **Sensors for Odour Monitoring**
- **Sensors for PM Detection at Low-Cost**

OUTREACH ACTIVITIES from Action TD1105

COST Action TD1105 - EuNetAir

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir

Action website:

www.cost.eunetair.it

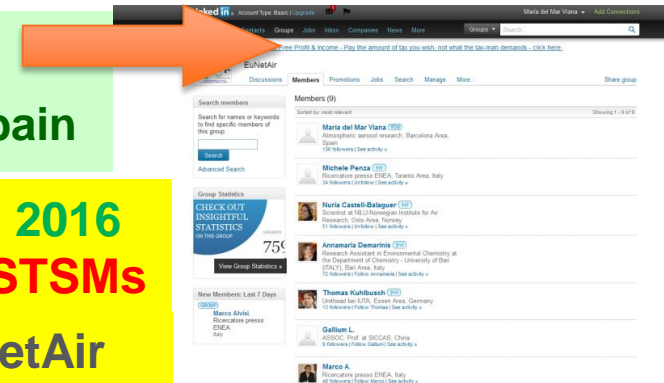
hosted by ENEA

Dr. Marco Alvisi, *Webmaster Coordinator*

Sebastiano Dipinto, Valerio Pfister, Gianfranco Zingarelli, *Webmaster Team*

Social Scientific ESRs Network (SSEN) by LinkedIn

Members: >100 - Moderators: M. Viana, M. Minguillon, CSIC, Spain



Short Term Scientific Mission Year 4: 4 Funded by 15 Nov. 2016
STSMs funded by EuNetAir in 2012-2016: 43 Beneficiaries/STSMs

Dr. Jan Theunis, VITO, Belgium, STSM Coordinator EuNetAir



EuNetAir Newsletter

COST Action TD1105 Iss. 1/Dec 2012

Opening Editorial

- Issue 1: published on Dec. 2012 ✓
- Issue 2: published on June 2013 ✓
- Issue 3: published on Dec. 2013 ✓
- Issue 4: published on June 2014 ✓
- Issue 5: published on Dec. 2014 ✓
- Issue 6: published on June 2015 ✓
- Issue 7: published on Dec. 2015 ✓
- Issue 8: published on Sept. 2016 ✓

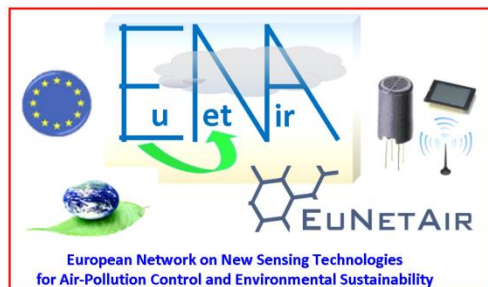
Leaflet 1: Jan 2013
Leaflet 2: Sept 2016

Brochure 1: Jan 2013
Brochure 2: Sept 2016

Prof. Ralf Moos, Univ. of Bayreuth, DE, *Editor-in-Chief*

Dr. Daniela Schonauer-Kamin, *Editorial Board Manager*

Contact Details



CSO Approval: 01 Dec. 2011
Kick-off Meeting: 16 May 2012
Start of Grant: 01 July 2012
End of Grant: 15 Nov. 2016

www.cost.eunetair.it

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http://www.cost.eu/domains_actions/essem/Actions/TD1105

Top Story 
▶ all stories

***TD1105 selected as Top-Story
by COST Association***



Taking charge of air quality control in Europe's smart, green cities



A COST funded network of European spin-offs, SMEs, agencies, research centres and universities is working on developing cheaper and energy efficient sensors for air quality control in Europe's future smart cities.

▶ full story

COST Action TD1105 *EuNetAir*: Scientific Meetings (MCM)

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



4° Scientific Meeting (7° MC)
Linköping, 3-5 June 2015



2° Scientific Meeting (4° MC)
Cambridge, 18-20 Dec. 2013



Kick-off Meeting at COST
Brussels, 12 May 2012



5° MC Meeting at EMRS
Lille, 30 May 2014



6° Scientific Meeting (9° MC)
Prague, 5-7 Oct. 2016



1° Scientific Meeting (2° MC)
Rome, 4-6 Dec. 2012

5° Scientific Meeting (8° MC)
Sofia, 16-18 Dec. 2015



3° MC Meeting
Barcelona, 21 June 2013



3° Scientific Meeting (6° MC)
Istanbul, 3-5 Dec. 2014

ACKNOWLEDGEMENTS

Prague, Czech Republic, 5 - 7 October 2016



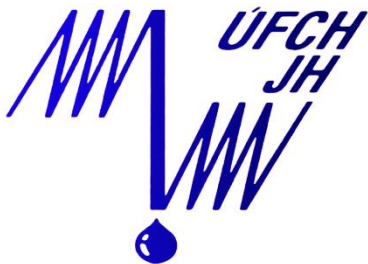
THANK YOU VERY MUCH FOR YOUR KIND ATTENTION !



Institute of Computer Science - ASCR



**The Czech Academy
of Sciences**



J. Heyrovský Institute of Physical Chemistry - ASCR



SEE YOU TOMORROW at **General Assembly & MC Meeting**

*at J. Heyrovsky Institute of Physical Chemistry
Academy of Sciences of Czech Republic
Prague, Czech Republic, 5 - 7 October 2016*



ASCR, Prague, 5-7 October 2016